

CENTRAL INTELLIGENCE AGENCY

INFORMATION REPORT

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SUBJECT The Moscow Television Center

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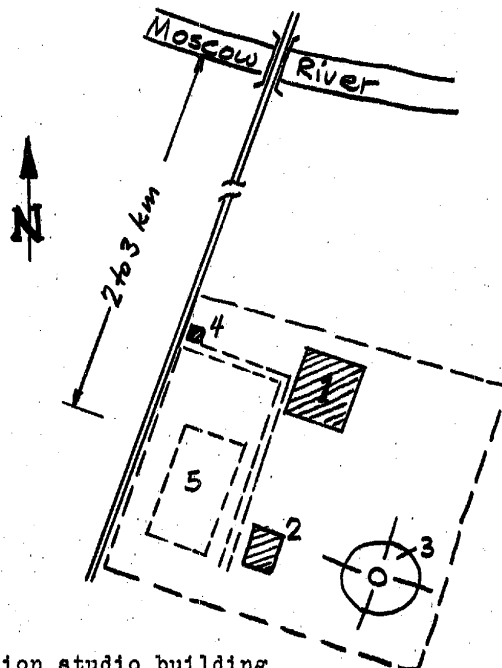
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INTRODUCTION

1. The Moscow Telecenter was located approximately two-three kilometers south of the Krymskiy Bridge in Moscow.

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- Point 1 Television studio building
Point 2 Building which housed the picture and sound transmitter
Point 3 Television antenna
Point 4 Guardhouse
Point 5 Radio broadcasting building (?)

THE AMERICAN-BUILT INSTALLATION

2. [redacted] RCA experts built, between the years 1935-37, the television studio portion of this center, including the buildings designated Point 1 and Point 2 above. [redacted] in [redacted] 1946 there was a single camera operating in the studio and two cameras were available for transmitting films. There were only a few iconoscopes in reserve (probably RCA products), and two of these were later given to SKB 833 in Fryazino for the new 625-line studio described in paragraph three.
3. Although the Moscow Telecenter was well maintained and operated, the Soviet engineers did not have the necessary experience to convert it from 375 lines to 625 lines. Our group was therefore given this assignment. The Soviet engineers thought this could be accomplished with minor adjustments to the existing sets, and it was therefore difficult to convince them that this conversion would necessitate a completely new installation and would take a long while. At length, however, it was agreed that [redacted] SKB 833 at Institute 160 should first build a

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model installation; at the same time the old RCA installation was to be kept in operation. When the model was in working order a new installation, patterned after the model, was to be built and was to replace the RCA installation. The development of the model installation was assigned to SKB 833 at Fryazino, and the permanent installation to NII 380, Leningrad.

THE MODEL INSTALLATION

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4. [] task at Fryazino was made difficult by the lack of materials, poor working equipment, and a shortage of workshop personnel. The Soviets also insisted on a strict observance of work quotas and deadlines which seemed foolish

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Iconoscope

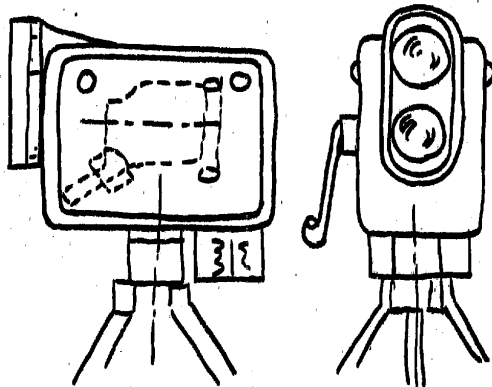
5. [] RCA iconoscopes. Apparently the USSR had purchased several of these shortly after World War II. NII 160 reproduced these and they were used both for the studio and the film cameras.

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Studio Camera

6. The casing, the optics, and the focusing equipment of the studio camera were all made at Fernseh A.G.. This material had been obtained from East Germany, since it was not available at that time in the USSR. The iconoscope switch for this equipment was arranged in a special manner: [] lamps, the brightness of which could be varied, behind the iconoscope, and used these to compensate for the interference signal of the iconoscope. The following is a sketch of the studio camera:

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Film Camera

7. [] and the switch was identical to that of the studio camera. To conform with a specific request of the Soviets, the camera was equipped with a carriage rail which facilitated the quick exchange of cameras, should one break down.

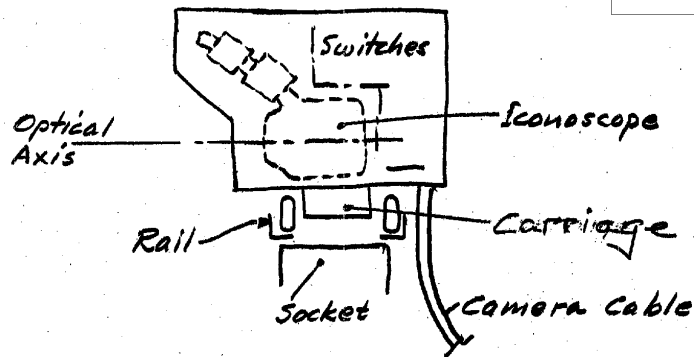
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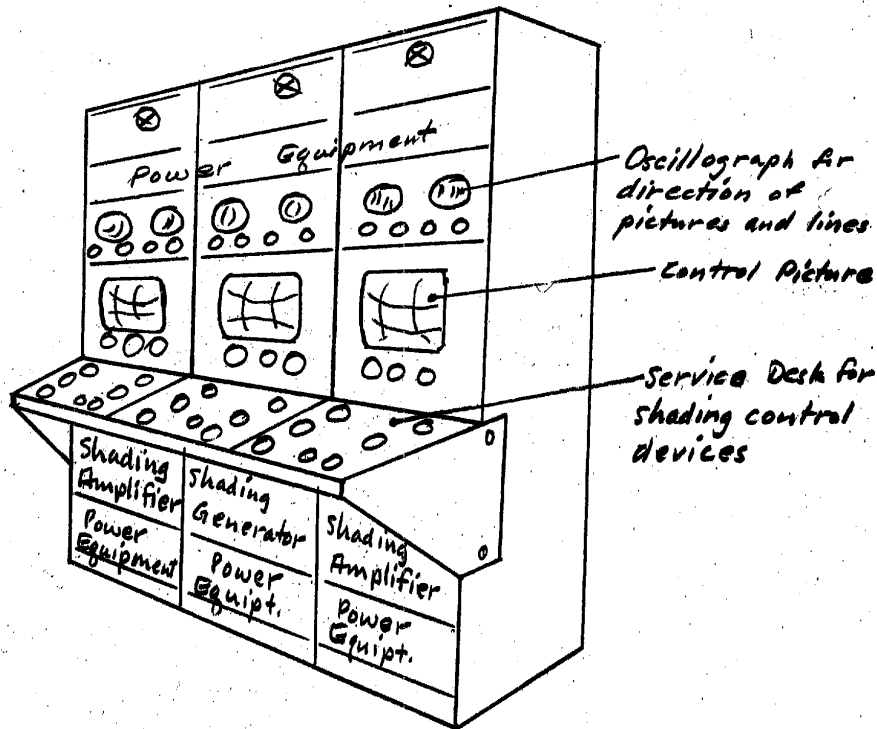
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Shading Desk for the Camera

8. At Berlin-Adlershof all accessory apparatus of the camera had been installed in one section of a tripartite amplifier desk. This was not done in Moscow, since a shortage of material made it necessary to distribute the accessory functions among two amplifier desks. The shading desk apparatus looked as follows:



Relay Commutator

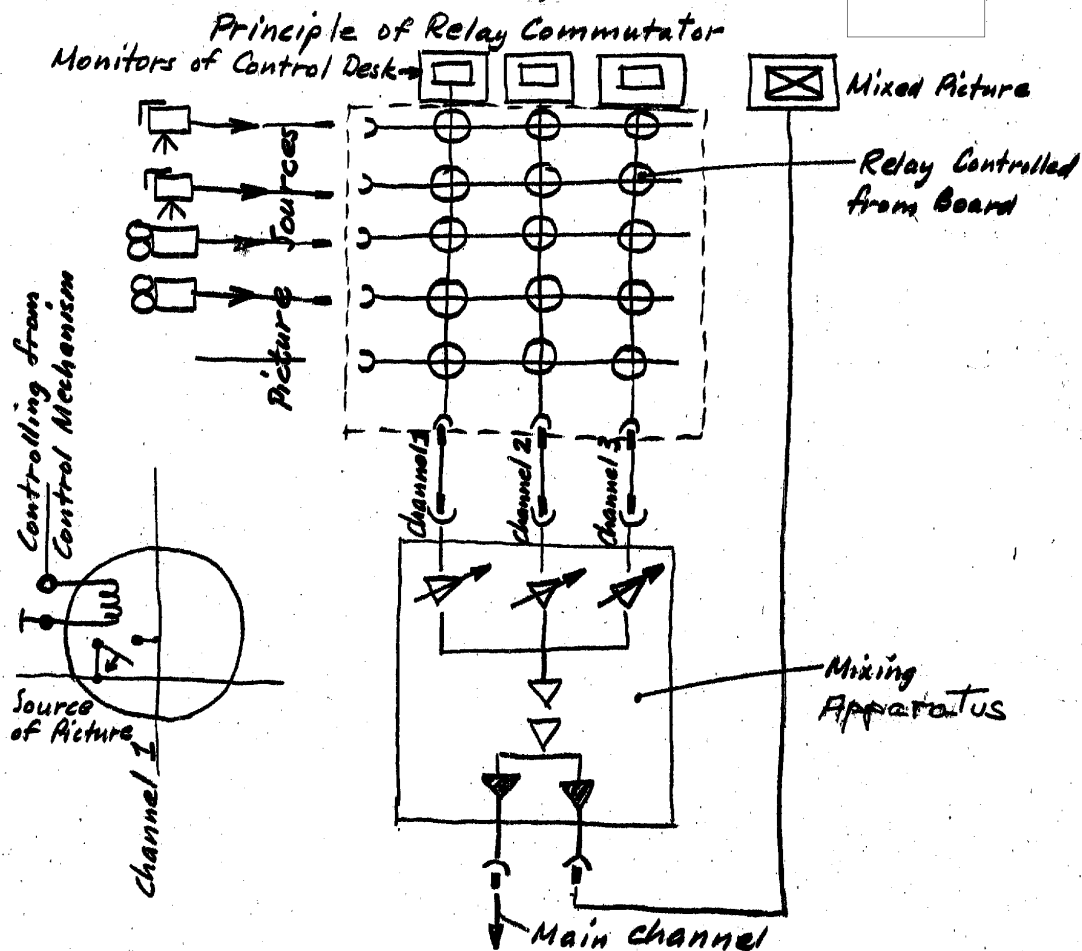
9. The camera and camera amplifier desk were contained in one unit. Three pictures, selected from a large number, could be shown on the preview monitors, which were located on the director's desk. The relay commutator used for this purpose could be serviced from the front. The principles of the relay commutator were as follows:

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Terminal Amplifier and Mixing Device

10. The terminal amplifier was geared mechanically to follow the relay commutator and mixing device.

Control Desk

11. A control desk, equipped with picture and oscillograph controls, was located at the end of the main cable.

Director's Desk

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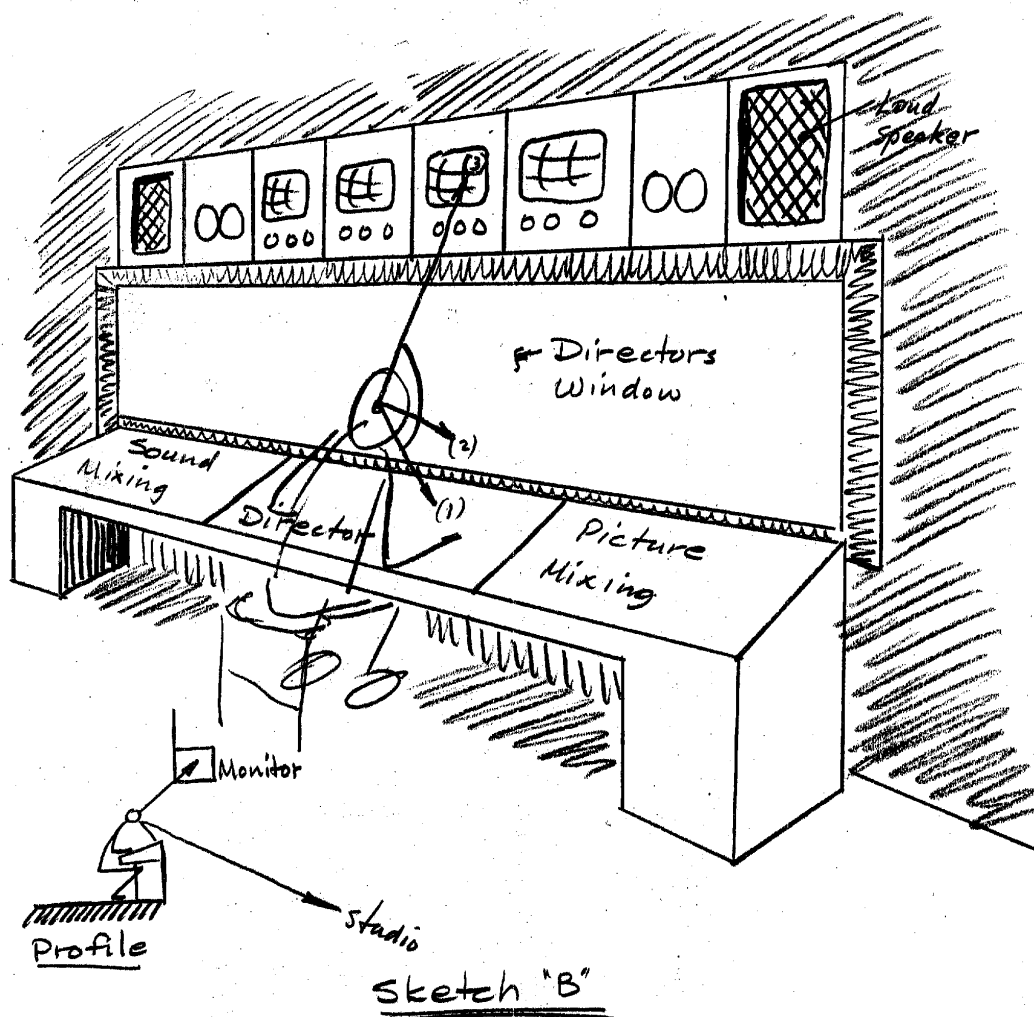
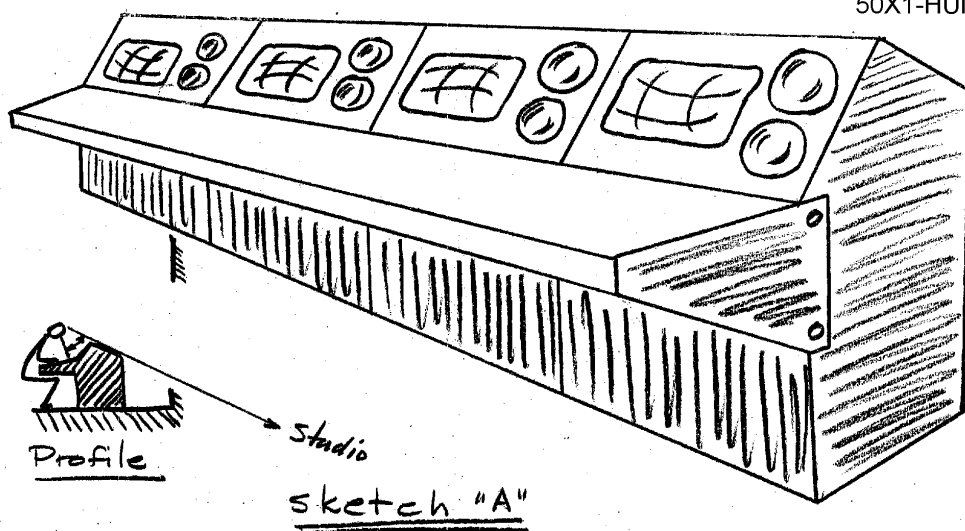
12. It was particularly difficult to agree on the form of the director's desk because it was located high above the studio floor and because the Soviets believed that the technical personnel servicing this unit should look over the desk into the studio. [redacted] the performance should be directed mainly by the picture which appeared on the screen -- the same picture which would be visible to the audience of a television performance. For this reason, the form of the SKB model was similar to that which had finally been developed at Adlershof. [redacted] proposal was not accepted by the Soviet engineers engaged in the development of the final installations. Sketch A below shows the director's desk proposed by the German engineers and rejected by the Soviets; sketch B shows the form of the director's desk which the Soviets accepted.

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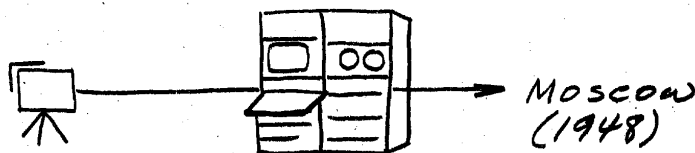
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13. In the final Moscow installation, the angle between the elements of the desk and the instruments above the director's window was unproportionally great and cumbersome. It necessitated tremendous movement of the operator's head, which doubtlessly will result in the operator's rapidly becoming unduly fatigued.

Shading

14. The model of SKB had a centralized shading compensation. Experience gained in the operation of the model resulted in each camera channel having its own shading desk in the final installation in Moscow. This made the channel appear as follows:



Installation Housing

15. Electrically speaking, the installation's main component parts were the same as those which had been used in Adlershof. However, through simplification of the switching devices and by making the arrangement more compact and smooth, the entire installation could be housed in one-third of a camera amplifier desk (as shown below).



THE FINAL INSTALLATION IN MOSCOW

16. The final installation for Moscow, under development in Leningrad, was not completed on the scheduled date set by the Soviets. Therefore, the technical management made two decisions:
- To temporarily use the old RCA installation during March 1948
 - To discontinue the SKB and merge its staff with that of the Television Institute (the "Forest Institute") located in Leningrad

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in April 1948; the staff of the SKB was distributed among the laboratories of the Leningrad Institute as "consultants". Finally in 1949-50 the final installation was made operative, and the Moscow studio building was remodelled and enlarged.

Optical Commutation between the Film Scanning Devices and the Iconoscope Cameras

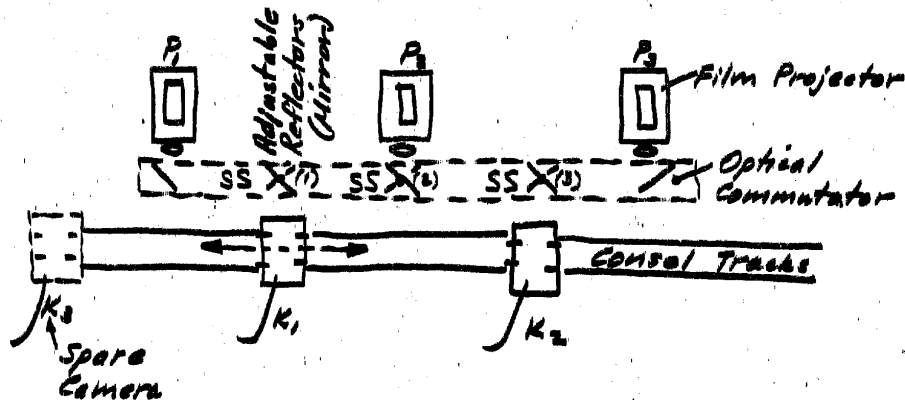
17. To best utilize all apparatuses and to have a reserve in case of a breakdown, the following arrangement of the film scanning device, recommended by the Soviets, was employed:

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three film cameras, P_1 , P_2 , and P_3 operated over an optical device which was equipped with three revolving mirrors, $S-S_{P_1}$, $S-S_{P_2}$ and $S-S_{P_3}$ on two iconoscopes. A film of more than one act was played alternately on projectors P_1 and P_2 using camera K_1 . The fading control was executed with the aid of the revolving mirror $S-S_{P_1}$. If camera K_1 broke down, the camera could be moved either to the left or right, and cameras K_2 or K_3 could take over. Whether this operation was successful or not was not known.

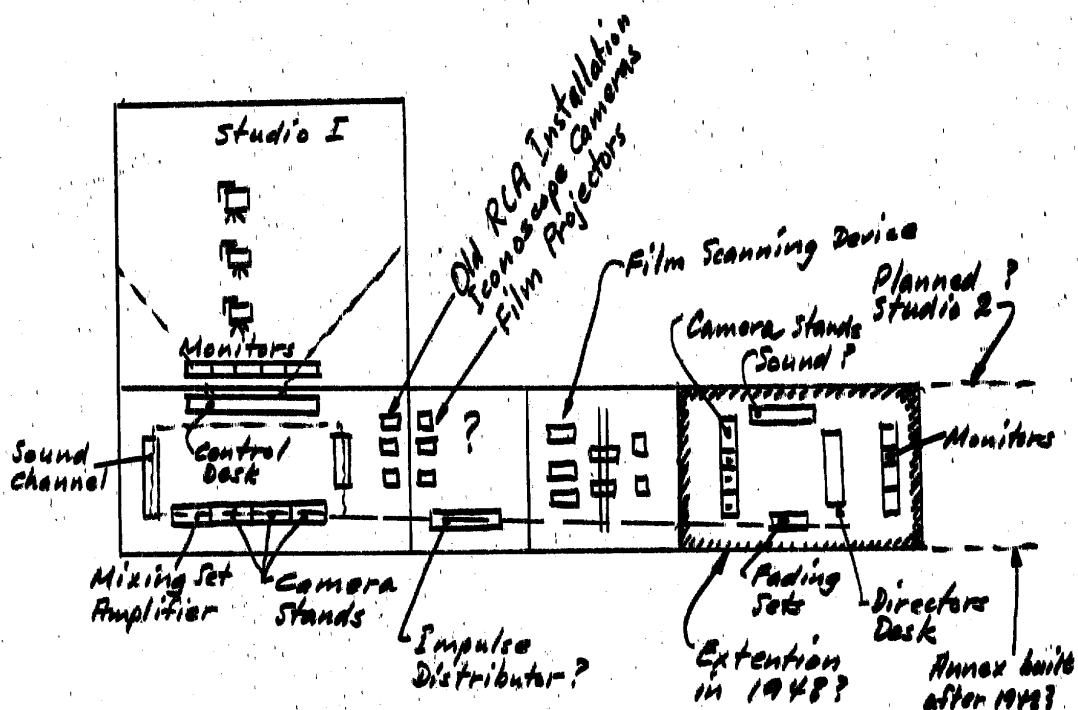
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GENERAL PLAN OF THE MOSCOW TELECENTER

18. As stated previously, when the old RCA installation was replaced by the 625-line installation, the Moscow studio building was remodelled, and enlarged. the television transmittal installation was arranged as follows:

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1. Comment.

The telecenter (N 55-43, E 37-37) is located approximately two kilometers south of the Krymskiy Bridge, which crosses the Moskva River in an east-south-easterl direction. No road from the bridge leads straight to the telecenter.

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